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PATENT, TRADEMARK AND COPYRIGHT LAW AND RELATED FEDERAL AND ITC LITIGATION

Docket No.: 4544-011-25 DIV_

ASSISTANT COMMISSIONER FOR PATENTS WASHINGTON, D.C. 20231

> U.S. Application Serial No. 08/420,503 RE:

> > RICHARD A. NEIFELD, PH.D. MICHAEL D. QUINN ET ALDEREK MASON, PH.D. Applicant(s):

April 12, 1995 Filing Date:

THERMODILUTION CATHETER HAVING A SAFE, For:

FLEXIBLE HEATING ELEMENT

3311

Group No.

NASSER Examiner:

SIR:

Attached hereto for filing are the following papers:

AMENDMENT (WITH 3 ATTACHMENTS)

CONSOLIDATED PTO-1449 (ATTACHMENT 1)

COPY OF U.S. PATENT NO. 5,464,398 (ATTACHMENT 2)

COPY OF U.S. PATENT NO. 5,450,466 (ATTACHMENT 3)

PETITION FOR ONE MONTH EXTENSION OF TIME

PROPOSED PTO-850

UPDATED 37 CFR 1.607 REQUEST FOR AN INTERFERENCE WITH TWO PATENTS

REQUEST FOR EXPEDITED PROSECUTION

Our check in the amount of \$110.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 CFR 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND MAIER & NEWSTADT

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Attorney of Record Richard A. Neifeld

Registration No. 35,299

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BAR MEMBERSHIP OTHER REGISTERED PATENT AGENT



ACHMENT 1

ATTACHMENT 1

SHEET _____ OF ____6___

Form PTO (Modified)	TETRA	U.S. DEPARTMENT OF PATENT AND TRADEMAR	ATTY. DOCKET NO.4544-011-25 DIV SERIAL NO. 08/420,503					
LIST	OF REF	ERENCES CITED BY APPLICANT al Sheets if Necessary)		APPLICANT MICHAEL D. QUINN ET AL.				
				FILING DATE GROUP APRIL 12, 1995 3311				
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME CLASS SUB FILING DATE CLASS IF APPROPRIS				
m	AB	3,075,515	01/29/63	RICHARDS	128	692		
	AA	3,359,974	12/26/67	KHALIL	128	2.05	10/07/63	
	AE	3,595,079	07/27/71	GRAHN, A.R.				
	AD	3,634,924	01/18/72	BLAKE ET AL.	29	447	04/20/70	
	AG	3,720,199	03/13/73	RISHTON ET AL.	128	1 D	05/14/71	
	AJ	3,746,003	07/17/73	BLAKE ET AL.	128	349B	09/23/71	
	AF	3,790,910	02/05/74	MCCORMACK	235	151.3	04/21/72	
	AI	3,798,967	03/26/74	GEILES ET AL.	73	204	04/13/72	
	AK	3,995,623	12/07/76	BLAKE ET AL.	128	2.06E_	02/11/76	
	AC	4,073,287	02/14/78	BRADLEY ET AL.	128	692		
ቦՎ	АН	4,089,336	05/16/78	CAGE ET AL.	128	303.1	12/20/74	
		F	OREIGN PATE	NT DOCUMENTS				
		DOCUMENT NUMBER	DATE	COUNTRY TRANSLATION YES NO				
M	AL	W091/03208	03/21/91	PCT				
	АМ	0 221 357	05/13/87	EUROPE				
	AN	0 235 811	09/09/87	EUROPE				
	AO	0 303 757	02/22/89	EUROPE				
	AP	0 378 234	07/18/90	EUROPE				
<u> </u>		OTHER REFERENCES (Includi	ng Author,	Title, Date, Pertinent Page	es, Etc.)			
,		A CONTINUOUS CARDIAC OUTPUT CO	MPUTER BASE	O ON THERMODILUTION PRINCIP	LES, R.A.	NORMANN E	T AL, ANNA	ALS OF
ar	AR	BIOMEDICAL ENG. VOL. 17, P. 61	-73, 1989.					
		INVESTIGATION OF A CONTINUOUS	HEATING/COO	LING TECHNIQUE FOR CARDIAC	OUTPUT ME	ASUREMENT,	KEVIN C.	EHLERS
	AS	ET AL., ANNALS OF BIOMEDICAL E	NG., VOL. 1	5, P. 551-565, 1987.				
		DETERMINATION OF CARDIAC OUTPU	T IN MAN BY	A NEW METHOD BASED ON THER	MODILUTIO	N, H.H. KI	HALIL ET AI	
Rin	AT	PRELIMINARY COMMUNICATIONS, 06/22/63, P. 1352-4.						
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Form PTO 1449 (Modified)			U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			SERIAL NO. 08/420,503		
		ERENCES CITED BY APPLICANT al Sheets if Necessary)		APPLICANT Michael D. Quinn et al.				
,,,,				FILING DATE GROUP APRIL 12, 1995 3311				
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME CLASS SUB FILING DAT				
R	AA	4,091,813	05/30/78	SHAW ET AL.	128	303.1	03/14/75	
	AK	4,185,632	01/29/80	SHAW	128	303.1	03/14/75	
	AD	4,198,957	04/22/80	CAGE ET AL.	128	1R	03/22/77	,
	AI	4,199,816	04/22/80	HUMPHREY	364	571	06/28/78	
	AC	4,206,759	06/10/80	SHAW	128	303.1	03/14/75	1
	AE	4,207,896	06/17/80	SHAW	128	303.1	03/14/75	
	АН	4,209,017	06/24/80	SHAW	128	303.1	03/14/75	
	AJ	4,217,910	08/90	KHALIL	128	670		
	AF	4,236,527	12/02/80	NEWBOWER	138	692	10/20/78	}
	AG	4,240,441	12/23/80	KHALIL	128	692		
R	АВ	4,303,984	12/01/81	HOUVIG	364	571	12/14/79	,
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		OTHER REFERENCES (Includi	ng Author,	Title, Date, Pertinent Pag	ges, Etc.)			
:		SERVICE MANUAL FOR MODEL COM-L	THERMODILU	TION CARDIAC OUTPUT COMPUT	ER, AMERIC	AN EDWARDS	LABORATO	RIES,
Pa	AR	JUNE 1984, P. 6 TABLE 2.1.					_	
1		REPEATED OR CONTINUAL MEASUREM	ENTS OF CAR	DIAC OUTPUT IN THE SQUIRRE	L MONKEY (SAIMIRI SC	IUREUS) B	Y
	AS	THERMODILUTION, H.H. KAHLIL, BUREAU OF MED. AND SURGERY, MR011.01.4, NAVAL AEROSPACE MED. INST.,						
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		ERENCES CITED BY APPLICANT al Sheets if Necessary)		APPLICANT MICHAEL D. QUINN ET AL.				
, and				FILING DATE GROUP APRIL 12, 1995 3311				
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME CLASS SUB FILING CLASS IF APPRO				
RY	AD	4,364,390	12/21/82	SHAW	128	303.1	09/05/79	
	AA	4,407,298	10/04/83	LENTZ ET AL.	128	713	07/16/81	
	АН	4,418,392	11/29/83	HATA	364	571	06/23/81	
	AJ	4,446,715	05/08/84	BAILEY	73	1R	06/07/82	
	AK	4,481,804	11/13/84	EBERHARD ET AL.	73	1G	08/30/82	
	AB	4,499,547	02/12/85	INUIYA ET AL.	364.	571	08/13/81	
	AG	4,499,907	02/19/85	KALLOK ET AL.	128	419D		
	AF	4,526,175	07/02/85	CHIN ET AL	128	344	02/22/83	
	AC	4,611,304	09/09/86	BUTENKO ET AL.	364	571	07/27/83	
	AE	4,621,643	11/11/86	NEW, JR. ET AL. 128		633	02/05/86	
in	AI	4,632,125	12/30/86	WEBLER, ET AL.	692	01/13/84		
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re		CRC HANDBOOK OF CHEMISTRY AND I	PHYSICS, 60 ¹	[™] ED., 1979-1980, P. 3-85 C	OLE-PARME	R INSTRUME	ENT CO., N	ILES,
	AR	IL. (CATALOG PAGES 1259-61).			···			
		CARDIAC OUTPUT ESTIMATION BY A	THERMODILU'	TION METHOD INVOLVING INTRA	VASCULAR	HEATING &	THERMISTOR	₹
[(AS							
		RECORDING, T. Barankay et al.,	Acta Physic	ologica Academiae Scientiar	um Hungar	icae, Tomu	is 58(2-5)	
M	AT	p.167-173, 1970.						
	L	BAXTER HEALTHCARE CORP., (CATA	LOG PAGES 1	, 2, 5, AND 6) JUNE 1992.				
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*EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								

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Form PTO 1449 (Modified)		U.S. DEPARTMENT OF PATENT AND TRADEMAR		ATTY. DOCKET NO.4544-011-25 DIV SERI			ERIAL NO. 08/420,503	
		ERENCES CITED BY APPLICANT al Sheets if Necessary)		APPLICANT MICHAEL D. QUINN ET AL.				
		,		FILING DATE APRIL 12, 1995 GROUP 3311				
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	SUB CLASS	FILING DATE IF APPROPRIATE		
res	AB	4,669,066	05/26/87	KAGAWA ET AL.			12/21/85	
	AC	4,684,245	08/04/87	GOLDRING	356	41	10/28/85	
	AG	4,685,470	08/11/87	SEKII ET AL.	128	692	11/18/85	
	LA	4,696,304	09/29/87	CHIN	128	673	04/23/86	
	AA	4,708,777	11/24/87	KURAOKA ET AL.	204	1T	02/05/85	
	AK	4,718,423	01/12/88	WILLIS ET AL.	128	713		
	AI	4,770,179	09/13/88	NEW, JR. ET AL.	128	633	10/19/87	
	AE	4,776,340	10/88	MORON ET AL.	128	634		
	АН	4,785,823	11/22/88	EGGERS ET AL.	128	692	07/21/87	
	AD	4,796,640	01/10/89	WEBLER, W.E.				
M	AF	4,814,586	03/89	GRISE	219	549		
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		OTHER REFERENCES (Includi	ng Author,	Title, Date, Pertinent Pag	es, Etc.)			
		MEASUREMENT OF CARDIAC OUTPUT	BY THERMAL-	DILUTION AND DIRECT FICK ME	THODS IN	DOGS, H.H.	Khalil et al.,	
La	AR	Journal of Appl. Physiol., Vol	. 21(3), p.	1131-5, 1966.				
		"CONTINUOUS THERMAL MEASUREMEN	T OF CARDIA	C OUTPUT," Philip, Long, Qu	uinn, Newb	ower, <u>IEEE</u>	Transactions	
	AS	on Biomedical Engineering, Vol	. SME-31, No	o. 5, May 1984, pp. 393-400).			
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			ERENCES CITED BY APPLICANT al Sheets if Necessary)		APPLICANT MICHAEL D. QUINN ET AL.				
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29		AD	4,819,655	04/11/89	WEBLER	128	713	08/04/87	
		AC	4,841,981	06/27/89	TANABE ET AL.	128	713		
		AA	4,856,530	08/15/89	VANDERVELDEN	128	692		
		АВ	4,858,615	08/22/89	MEINEMA	128	668	07/29/88	
		AE	4,868,476	09/19/89	RESPAUT	318	632	10/30/87	
		AF	4,869,263	09/26/89	SEGAL ET AL.	128	692	02/04/88	
		AG	4,901,734	02/20/90	GRIFFIN ET AL.	128	692	06/30/88	
		АН	4,941,475	07/90	WILLIAMS ET AL.	128	692		
		ΑI	4,942,877	07/24/90	SAKAI ET AL.	128	633	09/04/87	
		AJ	4,954,318	09/04/90	YAFUSO ET AL.	422	59	08/31/87	
n		AK	5,007,423	04/16/91	BRANSTETTER ET AL.	128	633	10/04/89	
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Form PTO 1449 (Modified)	Form PTO 1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			ATTY. DOCKET NO.4544-0	11-25 DIV	SERIAL NO. 08/420,503		
		ERENCES CITED BY APPLICANT al Sheets if Necessary)		APPLICANT MICHAEL D. QUINN ET AL	•			
				FILING DATE APRIL 12, 1995		GROUP 3311		•
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	SUB CLASS	FILING IF APPRO		
М	ΑI	5,009,234	04/91	ALT	128	692	12/88	
	АН	5,046,505	09/10/91	SEKII ET AL.		<u> </u>	09/05/89	
	AA	5,047,025	09/10/91	TAYLOR ET AL.	606	31	01/12/90	
	AB	5,056,526	10/15/91	KHALIL	128	713	10/89	
	AC	5,080,106	01/14/92	SEKII ET AL.	128	692	01/09/90	
	AG	5,121,749	06/16/92	NASSI ET AL.	128	692	09/12/90	
	AF	5,135,535	08/04/92	KRAMER	606	194	06/11/91	<u></u>
	AK	5,158,082	10/92	JONES	128	633	08/90	
	AD	5,214,267	05/93	HOSHI ET AL.	219	497	12/90	
N	AJ	5,435,308	07/95	GALLUP ET AL.	128_	713	07/92	
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		INTERNATIONAL SEARCH REPORT,		International app	lication No.
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B. E	TELL	cumentation searched (classification system followed by	classific	cation symbols)	
		28/691,693,700,713,736			
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Docum	entatio	on searched other than minimum documentation to the ext	ent that	such documents are niciade	d in the fields searches
<u> </u>			of data	have and where practicable	e search terms used)
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C.	DOC	UMENTS CONSIDERED TO BE RELEVANT			Relevant to claim
Catego	гу*	Citation of document, with indication, where appro-	priate,	of the relevant passages	Relevant to Clause 1
Y	•	US, A, 3,075,515 (RICHARDS) 29 January 1963, Sec	col. 3	, lines 1-15.	2-7,26-31, 37,39
			noe e-	a alament 290	21-24,33-35,
Y	US, A, 4,499,907 (KALLOK ET AL.) 19 February 1985, See element 280.				41,42,44
وند Y	US, A, 4,073,287 (BRADLEY ET AL.) 14 February 1978, See figure 6.				10
Y	•	US, A. 4,856,530 (VANDERVELDEN) 15 August 19	989, Se	e entire document.	21-24,33-35, 41,42,44
		US, A, 4,240,441 (KHALIL) 23 December 1980, Sea	entire	document.	1,8,9,13,
X Y	عو	US, A, 4,240,441 (RHALIE) 25 December 1980, 300	Cittae		16,17,21,
		·			32,38,43 2-7,10-12,
į					14,15,21-24
		`			26-31,32-35, 38-39,43,44
1					36-39,43,44
Y		US, A, 5,056,526 (KHALIL) 15 October 1991, See	element	12.	14,15
\ <u></u>	· <u>·</u>			6	
×	Fun	her documents are listed in the continuation of Box C.	<u></u>	See patent family annex	
•		pecial categories of cited documents: ocument defining the general state of the art which is not considered	Τ-	date and not in conflict with the apprinciple or theory underlying the	bb nearrog par citer m moners and
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-р-		focument published prior to the international filing date but later than	٠.	document member of the same ;	
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9 9 1	gory*	Citation of document, with indication, where appropriate, of the rele-	vant passages	Relevant to claim No.
Y Y	-	US, A, 4,841,981 (TANABE ET AL) 27 June 1989, See entire docume	nt.	2-7,26-31. 37,39
<u>x</u> Y	:	US, A, 4,901,734 (GRIFFIN ET AL.) 20 February 1990, See entire do	ocument.	1,18,19,20, 25,36,40 37,41,42
A		US. A, 3,798,967 (GIELES ET AL.) 26 March 1974, See entire documents	ment.	1,18-20,25, 36,37,40-42
m ^	• (US, A, 4,632,125 (WEBLER ET AL.) 30 December 1986, See entire	document.	1,18-20,25, 36,37,40-42
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both National Classification International Application No I. CLASSIFICATION OF SUBJECT MATE According to International Patent Classic Int.Cl. 5 A61B5/028

II. FIELDS SEARCHED

Minimum Documentation Searched

Classification Symbols Classification System

Int.C1. 5 **A61B**

> Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched

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Category °	Citation of Document, 11 with indication, where appropriate, of the relevant passages 12	
x	EP,A,O 303 757 (B. BRAUN MELSUNGEN A.G.) 22 February 1989	1-4,7,8, 10,11,13
X	see column 3, line 56 - column 4, line 42	17,18
X	see figures 1,4-10	22-25, 27,28, 30,31
x	US,A,4 796 640 (W.E. WEBLER) 10 January 1989 cited in the application	1-4,7-13
x !	see column 1, line 42 - column 2, line 28	17-28
X	see column 3, line 1 - column 4, line 35	30,31
x	US,A,4 632 125 (W.E. WEBLER ET AL.) 30 December 1986	14,7, 8,10-13
x	see column 4, line 48 - column 6, line 38	19,20
X	· · · · · · · · · · · · · · · · · · ·	22-25
X		27,30,31
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- * Special categories of cited documents: 10
- document defining the general state of the art which is not considered to be of particular relevance
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Date of Mailing of this International Search Report

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IV. CERTIFICATION

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Date of the Actual Completion of the International Search

15 JULY 1992

Signature of Authorized Officer

RIEB K.D.

EUROPEAN PATENT OFFICE

Form PCT/ISA/210 (second sheet) (January 1985)

International Searching Authority

PCT/US 92/02414

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	NTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)	
Category °	Citation of Document, with indication, where appropriate, of the relevant passages	Relevant to Claim No
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	•	
١	US,A,3 595 079 (A.R. GRAHN) 27 July 1971	1-4,
(see column 3, line 63 - column 5, line 21	10-13 19,23-25
	see figure 2	30,31
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ا ا	US,A,4 718 423 (A.F. WILLIS ET AL.) 12 January	1-4,10,
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	see column 4, line 9 - line 36 see column 6, line 8 - line 65	27-31
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